

We claim:

1. A method for achieving a circadian rhythm phase-delaying effect in a human, the method comprising the step of:

administering to the human an amount of melatonin, melatonin agonist or compound that increases endogenous production of melatonin in the human, wherein said administration produces in the human a plasma melatonin or agonist concentration of greater than quiescent melatonin or equivalent agonist levels at a time that does not overlap with onset of endogenous melatonin production in the human, and

wherein when melatonin, melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to produce plasma melatonin or agonist concentration of greater than quiescent melatonin or equivalent agonist levels that overlaps offset of endogenous melatonin production, said greater than quiescent melatonin or equivalent agonist levels rise after the melatonin onset and fall before the next melatonin onset.

2. The method of claim 1 wherein melatonin, melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to produce plasma melatonin or agonist concentration of greater than quiescent melatonin or equivalent agonist levels that rise after about CT 18 and fall before about CT 14.

3. The method of claim 2 wherein melatonin, melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to produce plasma melatonin or agonist concentration of greater than quiescent melatonin or equivalent agonist levels that rise after about CT 18 and fall before about CT 6.

4. The method of claim 2 wherein melatonin, melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to produce plasma melatonin or agonist concentration of greater than quiescent melatonin or equivalent agonist levels that rise after about CT 18 and fall before about CT 1.

5. A method according to Claims 1, 2, 3 or 4 wherein exogenous melatonin,

melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to a human in an immediate-release formulation.

6. A method according to Claims 1, 2, 3 or 4 wherein exogenous melatonin,
5 melatonin agonist or compound that increases endogenous production of melatonin in the human is administered to a human in a delayed-release formulation

7. A method according to Claims 1, 2, 3 or 4 wherein exogenous melatonin,
melatonin agonist or compound that increases endogenous production of melatonin in the human
10 is administered to a human in a sustained-release formulation.

8. A method according to Claims 1, 2, 3 or 4 wherein exogenous melatonin,
melatonin agonist or compound that increases endogenous production of melatonin in the human
is administered to a human in any combination of an immediate-release formulation, a delayed-
15 release formulation or a sustained-release formulation.

9. A method for achieving a circadian rhythm phase-delaying effect in a human, the
method comprising the step of administering to the human an amount of melatonin, melatonin
agonist or compound that increases endogenous production of melatonin in the human, wherein
20 said administration produces in the human a plasma melatonin or agonist concentration of
greater than quiescent melatonin or equivalent agonist levels during the time interval from about
CT 18 to about CT 6 than from the time interval from about CT 6 to about CT 18.

10. A method according to Claim 9 wherein melatonin, melatonin agonist or
25 compound that increases endogenous production of melatonin in the human is administered after
CT 18 and prior to about CT 1.

11. A method for alleviating a circadian rhythm disorder in a human, the method
comprising the step of achieving a circadian phase-delaying effect in the human according to the
method of Claims 1, 2, 3 or 4.
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12. The method of Claim 11 wherein the circadian rhythm disorder is jet lag.

13. The method of Claim 11 wherein the circadian rhythm disorder is winter depression.

14. The method of Claim 11 wherein the circadian rhythm disorder is a sleep disorder.

15. The method of Claim 14 wherein the sleep disorder is schedule-induced.

16. The method of Claims 14 or 15 wherein the sleep disorder is delayed sleep phase syndrome or advanced sleep phase syndrome.

17. The method of Claim 11 wherein the circadian rhythm disorder is a free-running circadian rhythm disorder.

18. A method for alleviating a circadian rhythm disorder in a human, the method comprising the step of achieving a circadian phase-delaying effect in the human according to the method of Claims 9 or 10.

19. The method of Claim 18 wherein the circadian rhythm disorder is jet lag.

20. The method of Claim 18 wherein the circadian rhythm disorder is winter depression.

21. The method of Claim 18 wherein the circadian rhythm disorder is a sleep disorder.

22. The method of Claim 21 wherein the sleep disorder is schedule-induced.

23. The method of Claims 21 or 22 wherein the sleep disorder is delayed sleep phase syndrome or advanced sleep phase syndrome.

24. The method of Claim 18 wherein the circadian rhythm disorder is a free-running circadian rhythm disorder.